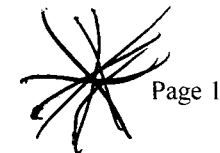


# Work Order ID 51513

August 25, 2009 1:34:31 PM



Item ID: D205-634-041

Accept



Setup Start



Revision ID: D

Stop



Item Name: Replacement Skidtube

Start Date: 8/24/09 Start Qty: 1.00



Cust Item ID:

Required Date: 8/24/09 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

*PL W*

Date: 09-8-25 Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2580

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

*N/A*

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend I

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

*(1x)*

*Q*

*MB 09-08-28*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 51513

August 25, 2009 1:34:31 PM



Item ID: D205-634-041

Accept



Setup Start



Revision ID: D

Stop



Item Name: Replacement Skidtube

Start Date: 8/24/09 Start Qty: 1.00



Cust Item ID:

Required Date: 8/24/09 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

0.00



Skidtubes

Memo

0.00

Skidtubes

1- Deburr ends

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

4- Scribe batch number insied aft end of tube.

1 Ø - AWM9-8-31

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

⇒ S 02/01/31

70

φ

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 51513

August 25, 2009 1:34:31 PM

Page 3

Item ID: D205-634-041

Accept

Setup Start

Revision ID: D

Stop

Item Name: Replacement Skidtube

Start Date: 8/24/09 Start Qty: 1.00

Cust Item ID:

Required Date: 8/24/09 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

140

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Weld step D2576 as per Dwg. D2580 and QSI 004

A/RU111 Aluminum Rod

mill 682

BE 09/09/01

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI 004.

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill

A/RU111 Aluminum Rod

mill 682

BE 09/09/01

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web. Debur

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Debur holes

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Debur

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Debur

AW 9-9-8  
A-M 9-9-8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 51513

August 25, 2009 1:34:31 PM



Page 4

Item ID: D205-634-041  
Revision ID: D  
Item Name: Replacement Skidtube

Accept



Setup Start



Stop



Start Date: 8/24/09 Start Qty: 1.00  
Required Date: 8/24/09 Req'd Qty: 1.00



Cust Item ID:  
Customer:

Reference:

Approvals: Process Plan:  
QC:

Date:  
Date:

Tooling:  
SPC (Y/N):

Date:  
Date:

Run Start  
Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

0.00

2) 8 09/09/10



φ

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

2) 8 09/09/10



φ

170



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

Memo

0.00

0.00

2) 11 09/09/10



φ

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng /, Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Work Order ID 51513

August 25, 2009 1:34:31 PM



Item ID: D205-634-041

Accept



Setup Start



Revision ID: D

Stop



Item Name: Replacement Skidtube

Start Date: 8/24/09 Start Qty: 1.00



Cust Item ID:

Required Date: 8/24/09 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

180

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

9:00AM  
320°F  
9:30AM

0.00

Powder Coating

190

QC3- Inspect Part Finish

0.00



QC

Memo

Quality Control

0.00

M112260

M 09/09/15

(X1) 0

BR 09-09-16.

0.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng/ Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Work Order ID 51513

August 25, 2009 1:34:31 PM



Page 6

Item ID: D205-634-041  
Revision ID: D  
Item Name: Replacement Skidtube

Accept



Setup Start



Stop



Start Date: 8/24/09 Start Qty: 1.00  
Required Date: 8/24/09 Req'd Qty: 1.00



Cust Item ID:  
Customer:

Reference:

Approvals: Process Plan:  
QC:

Date:  
Date:

Tooling:  
SPC (Y/N):

Date:  
Date:

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

200

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates  
A/R [ ] [ ] Sikaflex-291 M112391  
Sikaflex expire date: 12/30

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive  
A/R [ ] [ ] Sikaflex-291 M112391  
Sikaflex expire date: 12/30

5-Wing Walk as per Dwg D2580 and QSI 005 4.4  
Batch: M112106

*Handwritten signature and date: 09-04-17*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 51513

August 25, 2009 1:34:31 PM



Item ID: D205-634-041

Accept



Setup Start



Revision ID: D

Stop



Item Name: Replacement Skidtube

Start Date: 8/24/09 Start Qty: 1.00



Cust Item ID:

Required Date: 8/24/09 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

25/02/09/17



f

Quality Control

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

220

Packaging

0.00



Packaging

Memo

0.00

PPP

5/49)

9/6/09 DS

Packaging

Identify and pack for shipping as per PPPD205-634-041  
Location: \_\_\_\_\_  
PPP Rev: \_\_\_\_\_

230

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

09/09/30

Quality Control

09/09/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

August 25, 2009 1:34:30 PM

Page 1

10

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2580-1RevD		Manufactured	No			110	Each	14.0000	1.0000			



205 Skidtube bent detail



B-51477 MB 09-08-28

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		

Main Warehouse

LG	13	
50757	3	
50761	6	
50976	2	
50977	2	

Main Warehouse

ST	1	
50758	1	

D2576-3RevG

Manufactured No

140

Each

141.0000

1.0000



Step (maching detail)



<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		

Main Warehouse

ST	141	
43504	40	
46661	101	

1 BG 09/09/06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

August 25, 2009 1:34:30 PM

Page 2

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2579RevE		Manufactured	No			140	Each	464.0000	20.0000			



Crossbolt Spacer

<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-------------------------------------	----------------	-----------------

Main Warehouse

ST	464	
43988	4	
46434	4	
46956	2	
47797	9	
48272	22	
51314	100	
51315	323	

D2855RevA

Manufactured No

200

Each

29.0000

1.0000



Cap

<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-------------------------------------	----------------	-----------------

Main Warehouse

FP	-1	
50513	-1	
Main Warehouse		
FP6	31	
50513 ✓	31	
Main Warehouse		
ST	-1	
50513	-1	

20 BE 09/09/01

1 BK 09-09-17

August 25, 2009 1:34:30 PM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

August 25, 2009 1:34:30 PM

Page 3

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN3-5A		Purchased	No			200	Each	2,515.000	2.0000			



Bolt

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST    2515

100188    212

105057 ✓    2245

15205    58

AN960JD10L

Purchased

No

200

Each

6,679.000

2.0000



Washer

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

FP    -2

109632    -2

Main Warehouse

ST    6681

101291    16

104885    153

105793    236

109632 ✓    1276

110985    5000

2 BR 09-09-17

2 BR 09-09-17

August 25, 2009 1:34:30 PM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC, Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

August 25, 2009 1:34:30 PM

Page 4

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Start Date: 8/24/09

Required Date: 8/24/09

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
ALS7-1032-130		Purchased	No			200	Each	3,628.000	50.0000			



Insert

Warehouse Loc Qty Loc Code  
Location

Main Warehouse

ST	3628	
105855	16	
108606	52	
111529	1560	
111779 ✓	2000	

AN3C4A

Purchased

No

200

Each

632.0000

50.0000



BOLT

Warehouse Loc Qty Loc Code  
Location

Main Warehouse

FP	-50	
112314	-50	

Main Warehouse

ST	682	
112082	30	
112314	652	

(F14)

50

BK 08/24/09-17

August 25, 2009 1:34:30 PM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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# Picklist Print

August 25, 2009 1:34:30 PM

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960C10L		Purchased	No			200	Each	2,946.000	50.0000			



washer

Warehouse Loc Qty Loc Code

Location

OFFSHORE

FG 100

103585 100

Main Warehouse

FP -50

112116 ✓ -50

Main Warehouse

ST 2896

112116 2896

D3566-13RevC Manufactured No



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP -1

48166 -1

Main Warehouse

ST 21

45717 1

46889 1

48166 ✓ 3

50265 16

August 25, 2009 1:34:30 PM

Shop Packet Print

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

August 25, 2009 1:34:30 PM

Page 6

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3566-5RevC		Manufactured	No			200	Each	17.0000	1.0000			



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse 51669

FP19 -1

51260 -1

Main Warehouse

ST 18

36113 1

46186 1

47318 1

48167 1

51260 14

D3566-1RevC

Manufactured No

200

Each

27.0000

2.0000



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse 51612

FP -2

51259 -2

Main Warehouse

ST 29

46349 1

47434 2

51218 1

51259 25

August 25, 2009 1:34:30 PM

Shop Packet Print

Page 6

1 16090917

2 16090917

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

August 25, 2009 1:34:30 PM

Page 7

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-11RevD		Manufactured	No			200	Each	29.0000	1.0000			



Wearshoe



Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
FP	22	
51256 ✓	22	
Main Warehouse		
FP19	-1	
50112	-1	
Main Warehouse		
ST	8	
45823	1	
50112	7	

1 BL 07-09-17

August 25, 2009 1:34:30 PM

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Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

August 25, 2009 1:34:30 PM

Page 8

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-13RevD		Manufactured	No			200	Each	30.0000	1.0000			



Wearshoe



<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Main Warehouse		
FP17	17	
50270	17	
Main Warehouse		
FP19	-1	
50270	-1	
Main Warehouse		
ST	14	
45409	3	
46495	10	
47867	1	

1 12/02/09 17

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Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

August 25, 2009 1:34:30 PM

Page 9

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-9RevD		Manufactured	No			200	Each	20.0000	1.0000			



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse	51675	
FP19	-2	
51258	-2	
Main Warehouse		
ST	22	
44659	1	
45825	1	
51258	20	

1 BK 09-09-17

D3564-5RevD		Manufactured	No			200	Each	17.0000	1.0000			
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Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	2	
34806	2	
Main Warehouse		
FP19	15	
48555	1	
51257	14	

51655.

1 BK 09-09-17

August 25, 2009 1:34:30 PM

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Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

August 25, 2009 1:34:30 PM

Work Order ID: 51513

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2594-3RevC		Manufactured	No			200	Each	542.0000	16.0000			



O-Ring, 205 Skidtube

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST	542
27168	44
29908 ✓	498

D2594-1RevC

Manufactured No

200 Each 348.0000 16.0000



Plug, 205 Skidtube

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST	348
42221	16
42807	92
43884	3
46435	2
47251	235

51757

16 BR 09-09-17

16. 09-09-17.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07-06-28 *[Signature]*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

51515

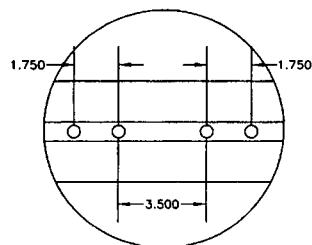
**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

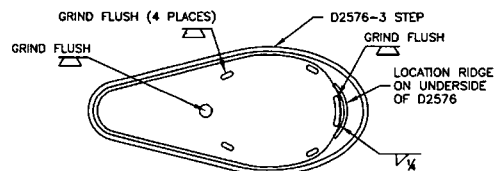
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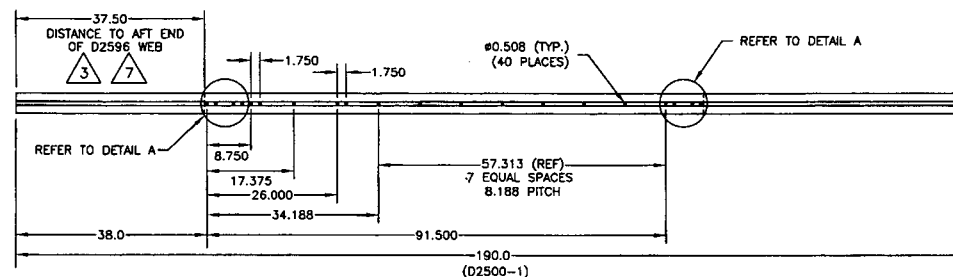
**DETAIL A**  
SCALE 5:24



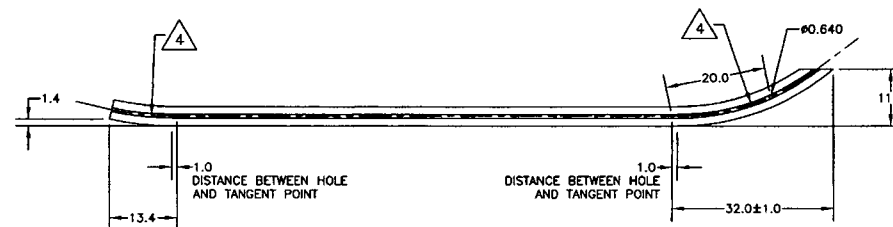
**DETAIL B**  
SCALE 5:24



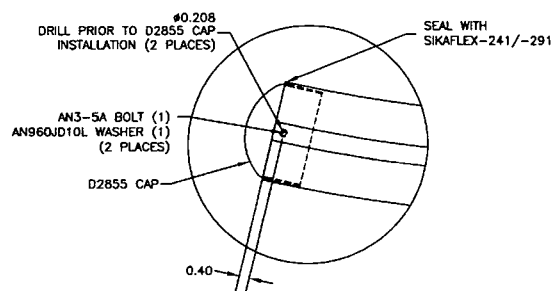
**D2580-1 DRILLING DETAIL**



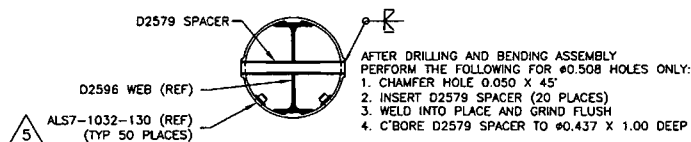
**D2580-1 BENDING AND CUTTING DETAIL**



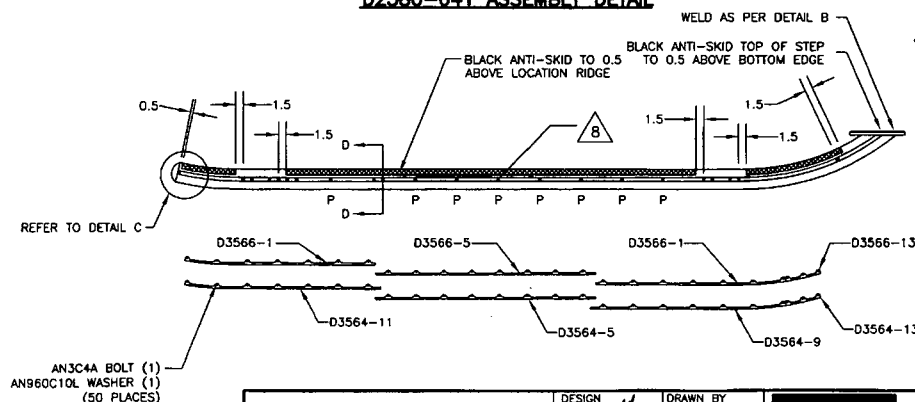
**DETAIL C**  
SCALE 5:24



**SECTION D-D**  
SCALE 5:24



**D2580-041 ASSEMBLY DETAIL**



**D2580-041 NOTES**

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

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DESIGN *[Signature]*

CHECKED *[Signature]*

DATE 07.02.27

DRAWN BY *[Signature]*

APPROVED *[Signature]*

**DART**

**DART AEROSPACE LTD.**  
HARRISBURG, ONTARIO, CANADA

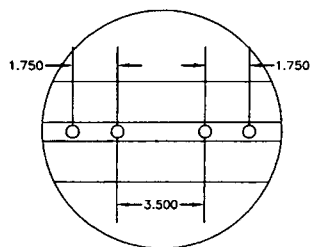
DRAWING NO.  
D2580

TITLE  
205 SKIDTUBE ASSEMBLY

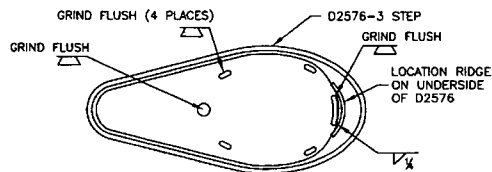
REV. 0  
SHEET 2 OF 3

SCALE  
1:24

**DETAIL E**  
SCALE 5:24

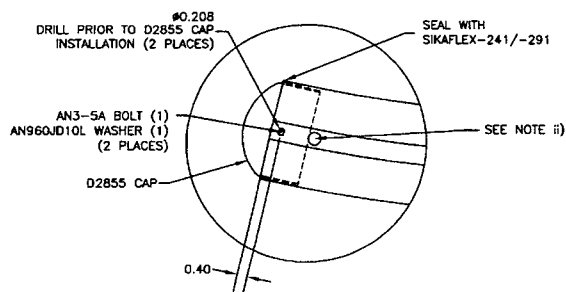


**DETAIL F**  
SCALE 5:24

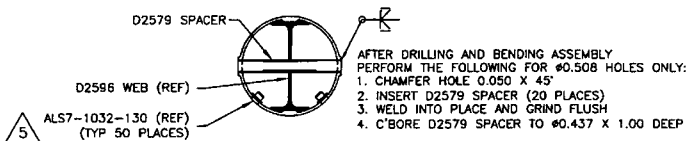


**RELEASED**  
07.06.28

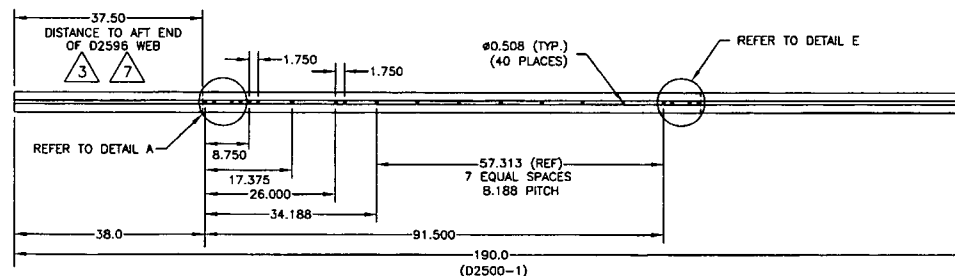
**DETAIL G**  
SCALE 5:24



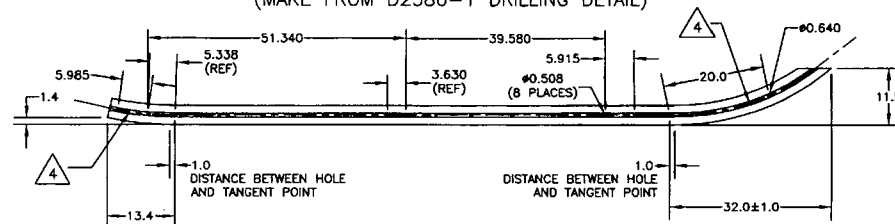
**SECTION H-H**  
SCALE 5:24



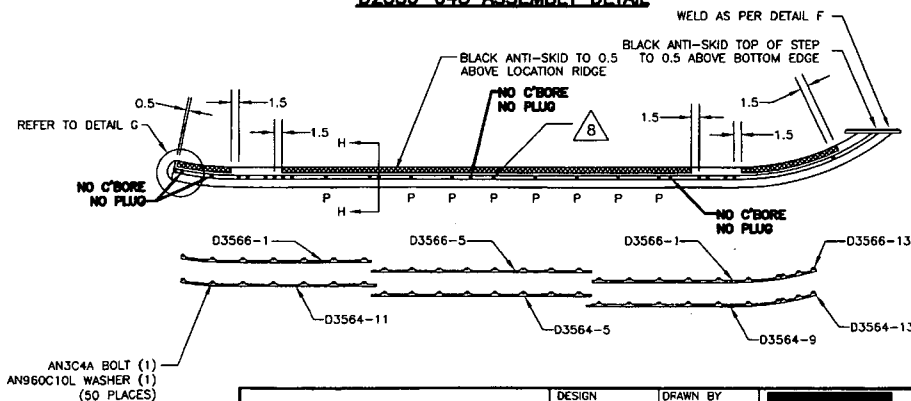
**D2580-1 DRILLING DETAIL**



**D2580-5 BENDING AND CUTTING DETAIL**  
(MAKE FROM D2580-1 DRILLING DETAIL)



**D2580-045 ASSEMBLY DETAIL**



**D2580-045 NOTES**

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

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DESIGN RH	DRAWN BY RH	<b>DART</b>	DART AEROSPACE LTD. HAMMERSLEY, ONTARIO, CANADA
CHECKED H	APPROVED H	DRAWING NO. D2580	REV. 0
DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY	SHEET 3 OF 3	SCALE 1:24

NO. 207

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 50849  
Part number: D205-624-041  
Description: 205 sk. tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pct. Duty Date of Test Coupon 09.08.27

Welder Barclay Elliott Date of Test Coupon 09.08.27

The above named individual is qualified in accordance with AWS D17.1.2001 to weld